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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,246	04/04/2001	David D. Sauder	100.169US01	2680

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Fogg, Slifer & Polglaze, P.A.  
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EXAMINER
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JONES, STEPHEN E

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/826,246

Applicant(s)

SAUDER ET AL.

Examiner

Stephen E. Jones

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,6,7,9,13-16,37,40,41,45 and 47-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6,7,9,14-16,37,40 and 41 is/are rejected.
- 7) ☒ Claim(s) 13, 45, and 47-50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh et al. (of record).

Satoh et al. (Figs. 1-2) teaches a filter including: a plurality of cavities (101a, 101b, etc.); a wall of the cavities comprises a dielectric board and has transmission lines (106a, 108a, 106b, 108b, etc.) on the board (i.e. trace on board) (see Col. 7 (lines 60-65) and Col. 10 (lines 34-36 and 45-50)); circuit reactance elements (110a, 110b, etc.) are coupled to the transmission lines (Claim 1); input and output connectors (103) are coupled to the two end cavities respectively and the connectors can be considered attached to the entire circuit (Claim 9) since the various elements are coupled together.

3. Claims 1, 9, 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Pelkonen (of record).

Pelkonen (Fig. 2) teaches a filter including: an enclosure having a wall including a dielectric board (11); traces are formed on the board including coupling element sections (e.g. 21) (Claim 1); and input and output port strip connectors (15, 16) are

coupled to the trace and circuit board. Also, there is interstage coupling structure between the input and output (e.g. the windows and the trace portions joining the cavities) (Claims 14-16).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 6-7, 37, 40, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. in combination with Piloto et al. and Newell et al. (all of record)

Satoh et al. teaches a filter as described above. However, Satoh does not teach a power amplifier (i.e. and electronic component) that is coupled to the trace (Claims 6-7, 37, 40, 41).

Piloto et al. teaches a waveguide cavity filter which includes dielectric circuit boards on the top of the filter for mounting circuit components such as power components and signal lines (see Col. 8, lines 49-52 and Figs. 4 and 8).

Newell et al. teaches using power amplifiers in combination with filters (e.g. see Figs. 1-2).

It would have been considered obvious to one of ordinary skill in the art to have included additional dielectric circuit board material on the top side of circuit board of the filter (such as taught by Piloto et al.) in the Satoh filter and to have included a power amplifier (such as taught by Newell) on the top side of the circuit board connected to the input and or output of the filter transmission line (108 of Satoh), because amplifying filter signals is well-known for providing a useful signal level to a transmitter or from a receiver, and the addition of the dielectric material would have provided the advantageous benefit of additional surface area for mounting additional circuitry including the power amplifier taught by Newell, thereby suggesting the obviousness of such modifications.

7. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelkonen in combination with Newell et al (both of record).

Pelkonen teaches a filter as described above. However, Pelkonen does not explicitly teach connecting a power amplifier to the trace.

Newell et al. teaches using power amplifiers in combination with filters (e.g. see Figs. 1-2).

It would have been considered obvious to one of ordinary skill in the art to have included a power amplifier (such as taught by Newell) connected to the input or output connection trace of the Pelkonen circuit board, because amplifying filter signals is well-known for providing the advantageous benefit of a useful signal level to a transmitter or from a receiver.

### ***Response to Arguments***

8. Applicant's arguments filed 6/30/03 have been fully considered but they are not persuasive.

Applicant argues that Satoh does not teach a dielectric board which forms one wall of the cavities.

Applicant's argument is not commensurate with what is claimed. The present claim merely recites that the at least one wall is "comprised" of a circuit board. Clearly Satoh teaches a wall having a circuit board and trace which thus meets the claim limitation.

With respect to claims 6-7, 37, and 40-41, Applicant also argues that Piloto does not teach a dielectric board on top of the filter.

Applicant argument is not convincing. Piloto clearly teaches that the dielectric waveguide filter has gold plating on its top and bottom surfaces which may be buried within the structure (e.g. see Col. 8, lines 24-37, and item 70 in Fig. 6 as compared to Fig. 8).


***Allowable Subject Matter***

9. Claims 13, 45, and 47-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Stephen Jones  
Patent Examiner  
Art Unit 2817

SEJ